

*Eclipse of the Sun, May 17th, 1863.*

By Capt. W. Noble.

The first indentation of the Moon upon the Sun's limb was observed about  $9^h 24^m 37^s$  local sidereal time =  $5^h 44^m 55^s.3$  local mean time. The Moon's limb was relatively smooth. The sky was very cloudy, and it was only at intervals that a distinct glimpse of the solar disk could be obtained. A slight break enabled the greatest phase to be observed. The Sun set densely obscured in a bank of clouds. Powers 42 and 74, approximate latitude and longitude  $51^\circ 0' 58''$  N., and  $17^\circ 5'$  E.

Forest Lodge, Maresfield,  
11th June, 1863.

*Total Eclipse of the Moon, June 1st, 1863.*

By Capt. W. Noble.

The singularly undefined character of the edge of the Earth's shadow, as viewed in the telescope, rendered anything like observations of Time hopeless. At the time of the middle of the eclipse, the lunar detail was well seen with a power of 42, save just in the centre of the shadow, where everything was obscured. I cannot remember ever to have seen such a nebulous density (if I may coin that expression) in any of the lunar eclipses which I have hitherto observed.

Forest Lodge, Maresfield,  
11th June, 1863.

*Occultation of  $\alpha$  Cancri by the Moon, 26th April, 1863.*

By Capt. W. Noble.

The star disappeared instantaneously at  $12^h 3^m 15^s.1$  local sidereal time =  $9^h 45^m 41^s.42$  local mean time. Power 115 adjusted on the star.

In the May number of the *Monthly Notices* is a paper by the Rev. W. R. Dawes on a very remarkable phenomenon observed by Mr. Copeland, near Manchester, upon the occasion of this occultation, viz., the extinction of three-fourths of the star's light just prior to its disappearance. I can only say that, as seen here,  $\alpha$  Cancri retained its intrinsic brightness up to the very instant of the Moon's covering it. I observed

with my Ross Equatoreal of 4.2 inches aperture, and although Mr. Copeland had the advantage of 0.8 inch in the diameter of his object-glass, my own instrument is one of such great and proved excellence, that I can only in his case, with great deference, suspect some optical illusion.

*Observatory, Forest Lodge, Maresfield,  
11th June, 1863.*

*Occultation of  $\alpha$  Cancri, 26th April, 1863. By J. Vertu, Esq.*

I did not think it worth communicating to the Society the observation I made of the occultation of  $\alpha$  Cancri on the 26th of April last; but the communications of Messrs. Burr and Dawes, in the *Notices* for May, induce me to send this note.

Some time before the occultation, having ascertained the position of the star, I adjusted the focus to the Moon, and was not a little surprised to find the *lumière cendrée* so strong that the complete circle was sharply defined, and some features in the *dark* part discernible; so much so that I was only a few seconds wrong in the time of occultation by estimation. Now as such is, I think, seldom if ever the case in this country at that age of the Moon (8.8 days), and notwithstanding the isolated and exceptional cases mentioned by Gruithuisen and Kunowsky, it would be desirable to ascertain the cause of such an anomaly—whether it be produced by an exceptional condition of the atmosphere, by the Sun's light being reflected on our satellite by some particular spot of the Earth's surface, or otherwise. It cannot be attributed to the instrument; for, with the same telescope and eye-piece, I watched the new Moon again, but after the sixth day I could perceive no trace of the Earth's light.

As regards the occultation, which I watched with increased attention, the star, which I followed until in contact with the Moon's edge, disappeared *instantaneously*. It seems to me highly improbable that a star—even supposing it to be double—which under a power of 1000 has given a round disk, would produce a perceptible diminution of light: I should rather attribute such an impression to the excitement produced on the retina by an intense and protracted gaze at the object.

It is true that "*Visus est acerrimus sensuum;*" but, *à fortiori*, this adage holds good in scrutinising the star in the telescope.

The telescope used in this observation is a  $3\frac{1}{2}$ -inch, by Troughton and Sims; power, 84.

*Nottingham, June 11, 1863.*